



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/386,734	08/31/99	RITZDORF	T SEM4492P0081

IM22/0928
CHRISTENSEN O CONNOR JOHNSON KINDNESS PL
1420 FIFTH AVENUE
SUITE 2800
SEATTLE WA 98101-2347

EXAMINER

WYSZOMIERSKI, G

ART UNIT	PAPER NUMBER
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1742

DATE MAILED:

09/28/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/386734

Applicant(s)

RITZDORF et al

Examiner

W4380185ski

Group Art Unit

1742

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 8/31/99 (Continuation Application)
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 36-40 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 36-40 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4
- ☒ Notice of Reference(s) Cited, PTO-892
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 36 and 37 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Frisby '801, column 5, line 56 to column 6, line 23, or Patel et al. '600, column 11, lines 36-42.

Claims 36 and 37 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Aboelfotoh et al. '444 column 3, line 65 to column 4, line 14.

Initially the examiner notes that a room temperature annealing process falls within the limitations of what is recited in the instant claims. Given that many metals and alloys (including copper and some of its alloys) are known to anneal at room temperature, the process as claimed is held to be clearly known in the art.

Turning to the applied prior art, the passages of Frisby, Patel, and Aboelfotoh noted supra disclose specific examples of subjecting deposited copper layers to an annealing process at a temperature within the limitations of the instant claims. Thus, Frisby, Patel et al., and Aboelfotoh et al. are held to fully meet the claimed limitations.

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frisby, Patel et al., or Aboelfotoh et al.


The prior art does not disclose the temperature gradient as defined in the instant claims. However, clearly any elevated temperature annealing process (such as those of Frisby, Patel, or Aboelfotoh) involves subjecting the material being annealed to a heat source, and the temperature of a portion of the material nearest to that heat source would be higher than a temperature of a portion further from the heat source. Therefore, to conduct the annealing steps as disclosed in the prior art while creating the claimed temperature gradient would fall within the purview of the prior art. Consequently, Frisby, Patel et al., or Aboelfotoh et al. are held to create a prima facie case of obviousness of the claimed invention.

5. The remainder of the art cited on the enclosed PTO-892 and 1449 forms is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, supra.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (703) 308-2531. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (703) 308-1146. The fax phone number for this Group is (703) 305-7719. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1120
1700

GPW
September 26, 2000